

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029924**Date Inspected:** 19-Aug-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Bernie Docena, Jesse Cayabyab**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS Tower**Summary of Items Observed:**

Caltrans Quality Assurance Inspector (QA) Joe Adame arrived at the American Bridge/Fluor (ABF) JV job site between the times noted above in order to monitor ABF Quality Control functions and the in process work being performed by ABF production personnel. The following items were observed:

ESW Repair excavation

RWR-201307-009

ESW E-045, Location "F"- B:

The QA Inspector was later present to observe ABF welder Wai Kit Lai (WID-2953) performing Shield Metal Arc Welding (SMAW) of the repair excavation on Electroslag Weld (ESW) "F", at face B. Locations are listed as detailed in Request for Weld Repair (RWR) 201307-009 from Ultrasonic Testing indications designated for repair.

The repair locations were noted as:

Y= 6350mm~6690mm

L= 340mm

W= 60mm

D= 52mm

Prior to welding, the welder was observed preheating the weld to over 300° Fahrenheit prior to welding using the Miller ProHeat 35 with heat induction blankets. The welder was using 4.0mm diameter electrode (E7018-1 HR4) per ABF Welding Procedure Specification (WPS) ABF-WPS-D15-1000-Repair Rev.3. The welding parameters were verified by ABF QC Inspector Bernie Docena at random intervals throughout the shift. The welding observed appeared to be in compliance with the WPS noted above.

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## WELDING INSPECTION REPORT

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NDT Inspection of Electroslag Welds (ESW)

RWR-201307-009

ESW E-045, Location "F"- Face A, B:

The QA Inspector observed ABF QC Inspector Jesse Cayabyab performed Ultrasonic Testing (UT) on Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as ESW "F" at face A, B. Mr. Cayabyab stated that he was instructed by ABF to perform pulse echo UT to document the depths and indications prior to repair (pre-repair verification). The areas will be reinspected after SMAW repairs. The original Y locations were indications identified with pitch/catch UT as rejectable or recordable and designated to be removed and repaired. Y Location was noted as – 5130mm and HAZ areas located 300mm above and below the prosed repair locations. QC/QA did not observe any rejectable indications with pulse echo UT.

QC/QA observed three recordable indications with pulse echo UT.

The QA Inspector also performed UT of the above mentioned ESW location in accordance with the ABF approved supplemental procedure for confirmation and evaluation of planar defects. Tandem report for work performed on this date will be completed by QC Inspector Jesse Cayabyab and signed by both QA/QC parties. Items listed on tandem report reflect indications agreed upon by QA/QC. See TL-6027 for additional details on the items inspected on this date.

ESW Repair excavation

RWR-201308-004

ESW S-043, Location "T"-Face B:

The QA Inspector was later present to observe ABF welder Mike Jimenez (WID-4671) performing excavation of ESW "T" Face B @ Y's-3090mm,3110,3125,3170,3190 to verify indications observed during Ultrasonic Testing pulse/echo & pitch/catch. Mr. Jimenez was performing the excavation using an air carbon arc gouging and a grinder and was instructed by ABF QC Inspector Jesse Cayabyab requested that the welder notify him when indications are visible to allow QC/QA to inspect the excavation. Location of the repair is as follows:

Weld excavated at 40mm dp- 30mm, 40mm, 50mm long planar indications (centerline crack) observed @3090, 3140, 3190.

Weld excavated at 50mm dp- 35mm,48mm long planar indications (centerline crack) observed @ 3140,3190.

Excavation Y=3000mm~3340mm, Current depth-50mm.

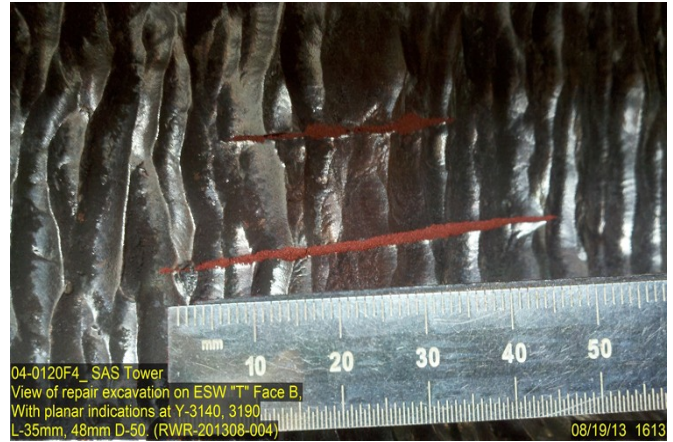
The QA Inspector observed the QC Inspector perform an informational MT inspection of the unground excavation and observed that the planar indications remained at the above mentioned depths. The QA Inspector also performed MT verification of the indications. Mr. Cayabyab stated that the excavation work will continue on 8/20/13. The information regarding the planar indications was passed along to ABF and CT METS representatives for additional review. The QA Inspector also informed Tower SMR Aaron Prchlik of the indications observed. See TL-6028 for additional details on items inspected on this date. See TL-6028 for additional details on items inspected on this date.

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# WELDING INSPECTION REPORT

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## Summary of Conversations:

Only general conversations with ABF/JV QC NDT personnel relevant to work and testing performed during this shift.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Adame,Joe	Quality Assurance Inspector
<b>Reviewed By:</b>	Mertz,Robert	QA Reviewer

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